buried from the light. To the eye there is no difference between seeds taken from the upper or lower racemes of the plant. It would be worth while to ascertain if the two will vegetate equally well.

The genus is marked by a *calyx of five leaves, two of which are wing-like and coloured. Capsule obcordate, two celled and two valved.* The species *rubella* has its *stems simple; leaves linear-oblong, mucronated; flowers racemed, those of the stem winged, those of the root apterous.*

Class *Diadelphia*, order *Octandria;* natural orders *Lomentaceæ*, Linn. *Pediculares*, Juss.

The Polygala rubella, here described, is the plant designated by that name in Muhlenberg's catalogue, as I have formerly learnt from the author himself. There is little doubt that Willdenow's plant is the same, described from an imperfect specimen. It is found in dry, sandy, or gravelly soils in many parts of the United States, and flowers in June and July.

Root somewhat fusiform, perennial, branching. Stems numerous, ascending, smooth, angular, simple. Leaves scattered, smooth, the lower ones obovate, smaller; the upper ones linear-lanceolate, obtuse, mucronated, sessile. Flowers purple, short-crested, in terminal racemes.



Bractes small, ovate-lanceolate, caducous. Wings of the calyx rhomboid-oval, obtuse, with a slight middle nerve. Corolla small, closed, of three segments, the middle one largest and crested by the division of its sides and extremity. Anthers eight, forming a double row, the filaments coalescing. Germ compressed, inversely heart-shaped; style deflexed; stigma bearded inside, with a prominence below it. Capsule inversely heart-shaped, nearly smooth, margined, and invested with the wings of the calyx. Seeds two, obovate, hairy, with a transparent appendage or strophiole on the inside. From the base of the stems proceed a number of prostrate shoots situated upon, and sometimes nearly under the ground, bearing a row of incomplete fertile flowers. These flowers are furnished with a calyx without wings, a minute corolla and stamens, and a short style. The germ and fruit precisely resemble those of the more perfect flowers.

Like some of the European species which it resembles in habit, this plant is a strong and permanent bitter, imparting its sensible properties both to spirit and to water. I digested a portion of the dried plant in ether, and added alcohol to the solution. No change was visible at the time of mixture, but on standing till the



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